

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 61227199  
PUBLICATION DATE : 09-10-86

APPLICATION DATE : 01-04-85  
APPLICATION NUMBER : 60068746

APPLICANT : KAWASAKI STEEL CORP;

INVENTOR : KIHATA ASAHARU;

INT.CL. : C25D 21/14 // C25D 3/22

TITLE : METHOD FOR SUPPLYING METAL ION IN ELECTROPLATING

ABSTRACT : PURPOSE: To accelerate the dissolution of a plating metal regardless of the pH value of a plating liquid by dissolving the plating metal in the plating liquid in the presence of a metal of which the oxidation-reduction potential is nobler than the plating metal in the stage of replenishing plating metal ions to the electroplating liquid for which an insoluble anode is used.

CONSTITUTION: The plating metal is deposited on a cathode which is a material to be plated by using the insoluble anode and using the plating liquid contg. the ions of the metal to be plated, by which the plating metallic film is formed. The plating metal ions in the plating liquid decrease on progression of the plating and therefore the concn. of the plating metal ions is increased by dissolving the plating metal in the plating liquid. The dissolving rate of the plating metal decreases with an increase in the pH of the plating liquid and therefore the decrease in the dissolving rate of the plating metal is prevented even if the pH value increases by adding the metal having the oxidation-reduction potential nobler than the oxidation-reduction potential of the plating metal to co-exist with the plating metal.

COPYRIGHT: (C)1986,JPO&Japio

BEST AVAILABLE COPY

## XP-002275125

AN - 1986-308308 [47]

AP - JP19850068746 19850401

CPY - KAWI

DC - M11

FS - CPI

IC - C25D3/22 ; C25D21/14

MC - M11-A04

PA - (KAWI) KAWASAKI STEEL CORP

PN - JP61227199 A 19861009 DW198647 005pp

PR - JP19850068746 19850401

XA - C1986-133457

XIC - C25D-003/22 ; C25D-021/14

AB - J61227199 In an electroplating in which metal ions are supplied into the plating bath by dissolving of the plating metal into the plating bath, the improvement comprises that the dissolving of the plating metal is effected in the presence of another metal having molar oxidn-redn. potential than the plating metal.

- The nobler metal is e.g. Ni or Ag etc. when the plating metal is Zn. The supply of the plating metal is e.g. effected using a barrel type metal dissolving appts. consists of a liq. tank contg. hthe platinga bath, and a rotatable barrel contg. metal particles. USE/ADVANTAGE - The dissolving of the plating metal into the plating bath is promoted, and the supply of the plating metal can be carried out rapidly within wide pH range. This plating using insoluble anodes. (5pp Dwg.No.0/3)

AW - ALLOY

AKW - ALLOY

IW - ELECTROPLATING SYSTEM ZINC ALLOY COATING DISSOLVE PLATE METAL BATH PRESENCE METAL NOBLE OXIDATION REDUCE POTENTIAL

IKW - ELECTROPLATING SYSTEM ZINC ALLOY COATING DISSOLVE PLATE METAL BATH PRESENCE METAL NOBLE OXIDATION REDUCE POTENTIAL

NC - 001

OPD - 1985-04-01

ORD - 1986-10-09

PAW - (KAWI) KAWASAKI STEEL CORP

TI - Electroplating system esp. for zinc (alloy) coatings - involves dissolution of plating metal in bath in presence of metal with nobler oxidn.-redn. potential

BEST AVAILABLE COPY